

Appendix E: PCB Action Descriptions

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Monitoring Trends of Selected PCB Congeners and Pesticides in Great Lakes Predator Fish Collected during 1994-1997. US Geological Survey, Biological Resources Division, Great Lakes Science Center (USGS/BRD/GLSC):

This agreement will provide information on the concentration of toxic organic contaminants in lake trout and walleye that have been collected for the Open Lake Trend Monitoring element (Element 1) of the Great Lakes Fish Contaminant Monitoring Program. Composites of whole fish will be analyzed for PCB congeners, toxaphene homologs, pesticides, and other contaminants as listed in the 1996 USGS/EPA Cooperative Agreement and in the Request for Proposal (RFP) from EPA/GLNPO dated April 9, 1997. The project will complement trend analyses performed in previous years in the Great Lakes Fish Contaminant Monitoring Program. This agreement will also provide information on the concentration of toxic organic contaminants in coho salmon that have been collected for the Game Fish Fillet Monitoring element (Element 2) of the Great Lakes Fish Contaminant Monitoring Program. Skin-on fillets will be analyzed for the same contaminants identified above for Element 1 of the Fish Monitoring Program. This part of the project will provide information regarding potential human exposure to contaminants through consumption of popular sport species, as well as complement trend analyses performed for top predator species with shorter exposures than lake trout. In addition to information collected for the Great Lakes Fish Contaminant Monitoring Program, this agreement will provide for the analyses of a small number of fish samples from Mariupol, Ukraine. Whole fish will be analyzed for the same contaminants identified above for the Great Lakes Fish Contaminant Monitoring Program. The results will provide information for a joint U.S. EPA and University of Illinois at Chicago project concerning environmental pollutants and the health status of children living in Mariupol. Project Period: 9/20/97 to 12/30/99.

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Cook County (Illinois) PCB and Mercury Clean Sweep: The waste collection component of the Cook County (Illinois) PCB and Mercury Clean Sweep pilot program began in October 1999 with a pickup of light ballasts containing PCBs, fluorescent lamps, lights and batteries from a park district in Cook County. This collection event was preceded by a mailing of brochures announcing and describing the Clean Sweep program to approximately 6,000 potentially participating businesses, organizations, and associations in the county. A web site was established (www.erc.uic.edu/cleansweep) containing a description of the program and information on PCBs and mercury, and a hotline number (1-888-SWEEP-22) was established for potential participants. The program provides PCB and mercury recycling or waste disposal at reduced costs until the end of 1999 for small businesses and local governments in Cook County, Illinois.

PCB Reduction Commitment Letter: The PCB Workgroup drafted a letter for signature by senior Environment Canada and U.S.EPA officials seeking commitments from targeted organizations to reduce their remaining PCBs. U.S.EPA Region 5's Regional Administrator sent letters to the three major automobile manufacturers in the U.S. (DaimlerChrysler, Ford, and General Motors) and to five major steel producers with facilities in the Great Lakes basin (Bethlehem Steel, Ispat Inland, LTV Steel, National Steel, and U.S. Steel). All three automobile manufacturers responded and committed to not only meet the PCB reduction challenge, but go beyond it in terms of the amount of PCBs reduced and/or when the company would eliminate all of its PCB equipment. Ispat Inland committed to reduce high level PCBs in electrical equipment by 95% by 2006. They also committed to continue a program to eliminate PCBs that are present in hydraulic systems in their plants. The letters to the steel producers were sent in late October, so not all of them have had time to respond as of this update. Environment Canada also sent PCB reduction commitment letters to six corporations in the automotive and iron/steel sectors. A response has been received from DaimlerChrysler indicating that they have met the Canadian PCB challenge. Responses from other corporations are also expected soon.

PCB Sources and Regulations Report: A re-draft of the PCB Sources and Regulations Background report, which covers Steps 1 & 2 of the Four-Step Analytical Process, was completed and posted on the BNS web site for public review. Comments on the report are due December 30, 1999. This report includes updated information regarding changes to U.S. PCB regulations, and new PCB data. The Step 1 & 2 report was also updated to include PCB sources and regulations in Canada.

U.S. PCB Transformer Registrations: The new PCB Transformer Registration Database shows that there are 18,714 transformers registered and in-use in the U.S., containing a total of 108,625,659 pounds of PCBs. The 1994 baseline of 200,000 estimated transformers containing high-level PCBs is higher than the reported 1998 database total. Although reductions of PCB transformers have occurred since 1994, the reductions alone may not account for the difference between the 1994 baseline and the number of transformers in the registration database. While the database provides the best existing and current information on the number of PCB transformers remaining in use, it has not been thoroughly quality controlled. In addition, the figures do not include registrations submitted after the initial development of the database and they do not include PCB transformers which were not registered. The PCB workgroup will evaluate the differences between the 1994 baseline and the 1998 database.

Ottawa River Hot Spot Delineation and Risk Assessment: Grant to the Toledo Metropolitan Area Council of Governments (on behalf of the Maumee RAP). Project period from 10/15/99 to 10/15/01. The purpose of this project is to support a sediment study and risk assessment on the Ottawa River, part of the Maumee Area of Concern. The project will allow for the collection of additional sediment cores, which will help to determine where the hot spots are. It will also make use of previously collected data to assess risk. Both of these activities will aid in developing priorities for future remediation.

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U.S. EPA's Office of Water has developed a Clean Water Action Plan. The Plan identifies nonpoint sources including atmospheric deposition as the most important remaining threat to water quality. Since U.S. EPA's existing programs do not focus on control of these nonpoint sources, the action plan emphasizes innovative approaches like consensus building among stakeholders at the local and watershed level for project efforts. Atmospheric deposition is among the prominent nonpoint sources addressed by the plan. A commitment toward inter-agency cooperation on understanding the risks of atmospheric deposition of nitrogen compounds and other toxic pollutants upon water bodies and integrating air deposition into TMDL determinations are also highlighted.

Sediment Assessment and Remediation Support: U.S. Army Corps of Engineers - Great Lakes and Ohio River Division: This amendment to the existing interagency agreement augments the existing funds for procuring the support of the U.S. Army Corps of Engineers in the collection and analysis of sediment samples, review of feasibility studies and remediation design plans, and other technical support for sediment assessment and remediation studies. This agreement allows for the integration and coordination of U.S.EPA and USACE activities and provides the U.S.EPA with access to USACE's vast technical experience in dealing with sediments on an "as needed" basis. Project Period: 12/01/98 to 9/30/00.

Fisheaters Family Health Study at Rouge River, Julie Wirth, PhD and Wilfried Karmaus, MD, Dept. Epidemiology. Michigan State University, May 28, 1999.

A large body of evidence derived from wildlife and experimental animal studies has demonstrated adverse effects of organochlorine contaminants, including PCBs, on a variety of health outcomes. However, in humans the findings are less consistent. Since PCBs tend to persist and bioaccumulate in various tissues, they have the potential to damage and/or interfere with the normal functioning of developmental, reproductive, neurological and immunological processes in exposed humans and animals. The most significant threat to human health from these compounds probably comes from their potential to impair

reproductive capacity and fetal health. Since these compounds can cross the placenta and the yolk sac, their ability to affect developmental processes in the embryo and fetus is of great concern. Additional exposure to the offspring can occur through their presence in the mother's milk.

The Fisheaters Family Health Project (funded by the Agency for Toxic Substances and Disease Registry) is assessing the effects of PCB exposure via consuming sport-caught Great Lakes fish on human reproductive measures. Sport-caught fish from the Great Lakes have been shown to have relatively high levels of PCBs as well as other environmental contaminants. The main goal of this project is to assess markers of reproductive health in two Michigan cohorts exposed either *directly* through consumption of sport-caught Great Lakes fish, or *indirectly* through *in utero* exposure. The cohort from which participants are recruited is the Department of Natural Resources database of men and women with Michigan fishing licenses. After over two years of recruiting we have very few participants from the Detroit area. In the process of contacting potential participants via our telephone recruiting scheme, we have been informed by respondents that a substantial number of people, especially people of color, fish in the Rouge River, which is highly contaminated with a variety of chemicals including PCBs. We have also been told that some of the anglers are subsistence fishers meaning that they eat their catch, not just occasionally, but as a major food source. Based on this information, it is likely that these anglers and any family members sharing the catch are at greatly increased risk for exposure to PCBs via consuming their catch. Thus, we expect a higher frequency of adverse health effects in this group.

In order to assess the risk to these men, women and their families, we would like to contact them and explain our project. The context for this exchange will be community centers, local churches, or possibly fishing sites on the river. If the anglers are willing, we would then administer a short questionnaire on their general health, reproductive health and fish eating habits, including the species they catch, where they catch them, how the fish are prepared and how much they eat. We would also like to obtain a blood sample from which to determine their serum PCB and reproductive hormone levels (for men: testosterone, luteinizing hormone and follicle stimulating hormone; for women, estradiol). Protocols to measure outcomes (questionnaires, blood collection and PCB and hormone analysis) are already in place for use in the Fisheaters Family Health Project. By using these venues to approach a population at risk for increased PCB exposure, we hope to make the local communities aware of the possible health risks as well as the benefits involved in eating sport-caught Great Lakes fish so that the individuals can make informed decisions. We also hope to stimulate involvement in local and state efforts at remediation.

Toledo Metropolitan Area Council of Governments: Ottawa River Hot Spot Delineation and Risk Assessment: The purpose of this project is to support a sediment study and risk assessment on the Ottawa River, part of the Maumee River Area of Concern. The activities will aid in developing priorities for future remediation. Project Period: 10/15/99 to 10/15/01. Funded by U.S. EPA-GLNPO.